

## REMARKS

This amendment responds to an Office Action dated March 22, 2004, in the above-identified patent application. Claims 1-21 are pending the application. Claims 1, 10, 17 and 21 are in independent form. Claims 10, 13 and 21 have been amended by this response. This response is submitted within three months of the Office Action outstanding. No fees are due.

In the Office Action dated March 22, 2004, the Examiner rejects claims 1-2, 4, 6-7, 9-11, 14, 17-18 and 20-21 under 35 USC 103(a) as allegedly being unpatentable over Ito et al. (US Publication No. US2003/0179345A1, hereinafter "Ito") in view of Matsuda (US Patent No. 5,703,861, hereinafter "Matsuda"). In rejecting in the claims the Examiner states that Ito discloses a polarized light beam splitter assembly that "lacks the second surface of the wire grid polarizer being secured to the second internal exposed surface of the prism in the perimeter region." The Examiner then states:

"However, Matsuda teaches an apparatus utilizing an embedded wire grid polarizer (see for example Figure 8), wherein the wire grid polarizer (See 34A, 34B in Figure 8) is secured to an exposed internal surface of a substrate (see 31 in Figure 8) via a spacer or raised projection of solder adhesive (See rectangular spacers connecting 31 and 32 in Figure 8) so as to define a gap between a surface of the wire grid polarizer and the exposed internal surface of the beam splitter prism. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the second surface of the wire grid polarizer of the polarized light beam splitter assembly of Ito et al. be secured to the second internal exposed surface of the prism in the perimeter region, as taught by Matsuda, for the purpose of providing a fixed alignment of the prism blocks and wire grid polarizer, thus reducing alignment and light scattering losses in the polarized light beam splitter assembly." (emphasis added).

Applicant respectfully disagrees. Applicant's independent claim 1 recites "said second surface of said wire grid polarizer secured to said second internal exposed surface of said prism in said perimeter region [of the wire grid polarizer]." Applicant's independent claim 10 as amended recites "wherein a perimeter region of said uppermost raised surface [of said wire grid polarizer] is secured to an internal surface of said beam splitter." Applicant's independent claim 17 recites "said embedded wire grid polarizer secured to said second section of said polarized light beam splitter only in an edge region of said second surface [of the wire grid polarizer]." Applicant's independent claim 21 as amended recites "an embedded wire grid polarizer secured to said second section [of said beam splitter] only in a perimeter region of said wire grid polarizer."

As stated by the Examiner, Ito does not teach or suggest securing the second surface of a wire grid polarizer to the second internal exposed surface of a beam splitter prism in a perimeter region. One skilled in the art would not look to Matsuda to cure the deficiencies of Ito.

Matsuda teaches a first side of each of polarizers 34A and 34B secured to the external surface of a heat sink plate 32 (Figure 8 of Matsuda). The second side of each of polarizers 34A and 34B is not secured to anything, and in particular, the edge or perimeter of the second side of each of polarizers 34A and 34B is not secured to anything. Instead, Matsuda teaches solder

adhesive that secures heat sink 32 to optical coupling device 31 in a region outwardly from polarizers 34A and 34B. Accordingly, Matsuda does not teach or suggest a beam splitter prism. Matsuda does not teach or suggest a wire grid polarizer secured to an internal surface of a beam splitter prism. Moreover, Matsuda does not teach or suggest an edge or perimeter region of a wire grid polarizer secured to the internal surface of a beam splitter prism. Matsuda does not mention the benefits of providing a space above the second surface of the polarizer within a beam splitter prism because Matsuda does not even address beam splitters. The Examiner is improperly expanding the teachings of Matsuda based on Applicant's disclosure.

As stated by the Examiner, Ito does not teach a "wire grid polarizer being secured to an exposed internal surface of the beam splitter via a spacer so as to define a gap between a surface of the wire grid polarizer and the exposed internal surface of the beam splitter prism." One skilled in the art would not look to Matsuda, which teaches a polarizer secured to the external surface of a heat sink plate, to modify the teachings of Ito. For these reasons Applicant believes independent claims 1, 10, 17 and 21, and corresponding dependent claims 2, 4, 6-7, 9, 11, 14, 18 and 20, are not taught or suggested by Ito or Matsuda, either alone or in combination, and Applicant respectfully requests allowance of the same.

In the Office Action the Examiner rejects claims 3, 5, 13 and 19 under 35 USC 103(a) as allegedly being unpatentable over Ito in view of Matsuda and further in view of Yamada (US Patent No. 6,013,339, hereinafter "Yamada"). Yamada does not even address beam splitter prisms. Claims 3 and

5, 13 and 19 are dependent on claims 1, 10 and 17, respectively, and therefore are allowable for the reasons discussed above.

In the Office Action the Examiner rejects claims 8 and 12 under 35 USC 103(a) as allegedly being unpatentable over Ito in view of Matsuda and further in view of Perkins (US Patent No. 6,288,840, hereinafter "Perkins"). Perkins does not teach or suggest a gap between a surface of a polarizer and a beam splitter prism section. Claims 8 and 12 are dependent on claims 1 and 10, respectively, and therefore are allowable for the reasons discussed above.

In the Office Action the Examiner rejects claims 15 and 16 under 35 USC 103(a) as allegedly being unpatentable over Ito in view of Matsuda. Claims 15 and 16 are dependent on claim 10 and therefore are allowable for the reasons discussed above.

Applicant respectfully requests entry of this Amendment and reconsideration of the application as amended.

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Respectfully submitted,

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